DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. III. SATURDAY, MAY 24, 1851. NO. 11.

RAYNOLDS & NOURSE, *Proprietors.* OFFICE, QUINCY HALL, BOSTON. S. W. COLE, *Editor.*

NORTHERN SPY APPLE.

This beautiful and excellent fruit is in our market this spring, in moderate quantities, selling at high prices. It is fresh and juicy, and is in use in a good time, as it becomes ripe about the time the Baldwin is failing. The Spy apple is in use in spring and early summer. It is large, generally fair, and of the best quality. We have had this fruit every year for six or seven years, and have examined the subject well, comparing it with various other apples.

A few years ago, we found a stray barrel of the Spy in the market, without name, and we bought it at the usual price of apples. From exposure, these ripened up in winter when the Baldwin was in its prime, and we found the Spy finer in texture and much superior in quality to the Baldwin as a table fruit. As a winter apple, the Baldwin stands unrivalled for its great growth and production, and it is a popular apple in the market; but in the spring, it grows mealy at the core, and loses its quality, though still preserving a fair exterior. When one side of the Spy is decayed, the other side is fresh and juicy, so that in attempting to keep them long, they are not lost, before exhibiting indications of decline.

In favorable locations, in western New York, and with good culture, the Spy produces large crops of fine fruit, and as our climate is similar, we hope that it will succeed well here. Whether it will ripen up well much farther north, remains to be tested. One thing is certain, that it is very hardy against cold, more so than the Baldwin.

From the facts we already have on this subject, we believe that we must have a good strong soil, and high culture, for the Spy apple, and as the shoots run up very thick, they will doubtless need thinning to let in the sun. We have observed that those specimens of this fruit that lack color, are wanting in quality also, showing that exposure to sun and air are requisite to bring them to perfection.

As a limestone soil is said to be best for the Spy apple, we advise those who cultivate it where there is probably a deficiency of lime, to put a little old lime around their trees. Ashes, and a small quantity of bone manure and salt, are also very good for all kinds of fruit trees on old lands.

Some nurserymen who have not kept pace with the improvement of the times, have discouraged the cultivation of the Spy apple. We wish that such persons would compare it with the best fruits in the market, and then judge whether it is not better to cultivate some late fruits for spring and early summer, than for all to cultivate one kind extensively, which fails in the spring.

GRAY DOYENNE PEAR.

A subscriber remarks that in the list of good pears approved by the Fruit Grower's Convention is the Gray Doyenne, with qualifications, "in certain situations;" and he inquires whether reference is made to soil or exposure, or both. In reply we would state that reference is made to soil, location, climate, or any other circumstance that may affect the fruit unfavorably.

The St. Michael pear generally fails, by blasting and cracking, in New England, near the sea; but it flourishes in the interior of this section of the country, and in the middle and western States, it is one of the best, richest and most profitable pears, being hardy both in tree and fruit.

The Gray Doyenne resembles the St. Michael (White Doyenne), and generally fails where that fails. It is more round than the St. Michael, has much cinnamon russet, and is a little later, and rather better. The Gray Doyenne blasts in the northern part of Ohio.

Large Oxen.—Mr. Increase Robinson, of East Weymouth, brought a pair of fat oxen to this market, last week, which weighed 4200 pounds. He sold them to Potter & Leland.

SALE OF STOCK.

At the public sale of the stock of Wm. S. King, Esq., at Woodland Farm, near Providence, R. I., May 7, the following animals were sold at the prices and to the purchasers as follows. We have not the residence of the purchasers generally:—

BULL.

Tempest, short horn, to J. Thompson, for	$85,00

COWS.

Brindle, to M. P. Wilder, Dorchester, for	$100,00
Pink, seven-eighths Devon, to John Lane for	105,00
Daisy, to A. W. Brown, for	50,00
Brighton, a native, to Wm. Goddard, for	37,50
Kate, polled or hornless, to W. A. Howard, Providence, for	$34,00
Rose, native, to J. S. Cabot, Salem, for	70,00
Jessie, Ayrshire, to B. Balch, for	47,50
Flora, short-horn, to J. E. Crane, for	50,00
Jessica, Holstein, to S. J. Capen, Dorchester, Mass., for	$170,00
Pansy, to W. S. Simmons, for	32,50
Judy, to W. Whipple, for	35,00
Gypsey, to V. Bump, for	50,00
Bountiful, to E. Wood, for	70,00
Lucy, to Keith, for	30,00
Sybil, to G. A. Kenyan, for	35,00
Rosette, polled, to J. Dunnell, for	75,00
Becky, to M. P. Wilder, for	40,00

HEIFER-CALVES.

Atalanta, to John Giles, Providence, for	$35,00
Linnet, to M. P. Wilder, for	17,50
Die Vernon, to Charles Bradley, for	17,50
Fanny, to W. A. Howard, for	18,00
Cora, to S. Amey, for	22,50
Blanche, to E. Wood, for	25,00
Flirt, to S. J. Capen,	40,00

PLOUGHING UNDER GRASS.

If greensward be ploughed the latter part of May, or early in June, after the grass has got a good start, and the sod completely inverted, it will decay very rapidly, from the fermentation of the green crop, and very soon become available food to the growing plants. When grass lands are ploughed late in the season, with a good crop of green matter to turn under, the sod will decay sooner than if ploughed in fall, or early in spring.

One not experienced in this mode of cultivation will be astonished at the rapidity of decomposition in the sod. We ploughed a rather tough grass sod the 20th of June; then spread manure; harrowed thoroughly, and planted potatoes. In only a few weeks they were ready for hoeing, and at this operation, the sod was already decaying and becoming mellow,. At harvesting it seemed completely decomposed. From the large crop, with only light manuring, it was evident that the sod and grass contributed principally to the production of a large crop.

Sward land, with a good crop of grass, ploughed late, is in good condition for corn or potatoes, or almost any other crop, with suitable manuring. By repeated harrowing, so as to produce fine tilth, it is suitable for squashes, cucumbers, melons, pumpkins and cabbages, and they will generally succeed better on rich lands than on old ground, which often abounds in insects. It is also good for buckwheat, and for rutabagas and other turnips; and if the land is a deep loam, and ploughed deep, and well pulverized, it will answer well for beets and carrots. It is also good for fodder corn.

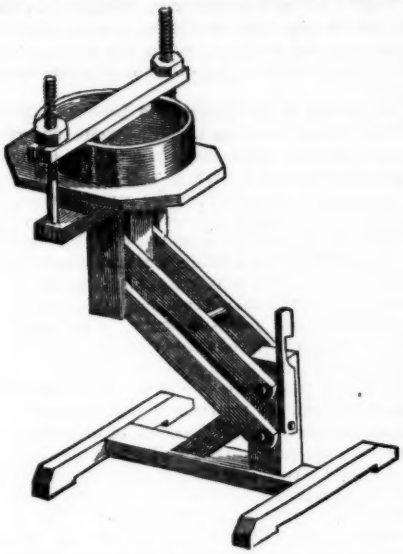
CARROTS.

Carrots bear a succession of crops very well; better than most other crops; yet it is not an established fact that they will bear good crops for a series of years so profitably as they would by a change of soil, and by being brought into a rotation once in three or four years.

Generally there is no advantage in cultivating one crop on the same land for a series of years; for, in order to get good crops, higher manuring will be necessary than in a rotation. As different crops differ in their constituent elements, they, of course, draw different elements from the soil.—There is, generally, economy in a rotation of crops, as less manure is required. There are some exceptions. The onion, for instance, not only bears a succession of crops with success, but it is said that it flourishes better on land that has been long under its cultivation. An instance is named of a piece of land in England that has borne good crops of onions for 400 years in succession.

VARIETIES OF ASPARAGUS.—Some have given asparagus very high culture, and christened the product, Giant Asparagus, and other great names, and in this way they have deceived many. We have never known but one variety cultivated here, which is called simply asparagus. It is astonishing what high culture and good management will do for a crop; and it is no wonder that those who have never seen it tried should be ready to believe that the result is the effect of a superior variety of vegetable. We should investigate causes, and not judge too much by appearances.

LUCERNE.—We have an inquiry whether Lucerne (French clover) will pay for cultivation as far north as nearly forty-five degrees. Thorough experiments have been made with this clover in a milder climate by several degrees, and we have never known a successful experiment. Lucerne requires as rich a soil, as fine a tilth, and as much cultivation the first year, as a crop of beets or turnips. It is liable to be winter killed, in colder climates than this, and in this latitude it is frequently thrown out of the ground in winter and spring.



PATENT SELF-ACTING CHEESE PRESS.

This is a light, strong, portable press, affording many conveniences to the dairy woman. It is in reality a table on which to turn the cheese. There is no forcing of screws, no lifting of weights; but the cheese creates a constant and regular pressure of twelve times its own weight, whether large or small, and if a greater pressure is needed, one pound laid on the cheese or table adds twelve pounds increased pressure, and so on in the same proportion. The cheese is not removed from the press until the pressing is completed.

For the New England Farmer.

EFFECTS OF COAL TAR ON FRUIT TREES.

Mr. Cole:—In the fall of 1848 I was desirous of obtaining a preventive against the ravages of the field mice, some of my fruit trees in a previous season having been destroyed by them. I found in Downing's "Fruit and Fruit Trees of America" the following, to prevent mice or rabbits from girdling trees. "The most effectual remedy is the coal tar made at the city gas works. Before winter commences, a coat of this is, with a common painter's brush, laid on the lower part of the trunk, from the ground to the height of two feet. Experience has proved that it does no injury whatever to the tree, while it completely prevents, for that season, the attacks of mice, rabbits and bark devourers of every kind."

He mentions also soot and milk as a preventive; this I tried first, but finding it difficult to make a satisfactory composition of such ingredients, I obtained some coal tar from the "city gas works."—This I applied to thirty or forty trees, principally strong, healthy Baldwins, some six or eight years old. In the following spring I examined the trees, and certainly they were uninjured by the mice. I next endeavored to remove the tar, but here was the rub, and a hard rub it proved, for the strongest whale oil soap solution I could apply had not the slightest effect in removing the tar. I then endeavored to scrape it off, but I found, to get the tar off in this way, I should be obliged to take bark and all. This not being exactly what was desirable, I suffered the trees to remain with their unsightly black coats. Since that period the greater number of them are dead or dying, and I can account for the fact in no way, except from the influence of the coal tar, not only from its binding the bark of the tree, but from its excluding from the parts covered by it, air, light and moisture.—These effects I am certain that it has.

Most if not all of my trees were as strong and healthy ones as I have ever seen; in most excellent situations in all respects; the ground about them kept open by ploughing, and free from grass and weeds. Within a day or two I have examined those which were among the best; these, some six or eight, look well *everywhere but where the tar was applied;* there the old bark is peeling off, and that beneath appears more like the bark of the buttonwood than the Baldwin apple tree.—The trees look, now that the tar is wearing off, as if a strong caustic had been applied to their trunks. I have no doubt that the coal tar has or will be the destruction of three-quarters of them. Everywhere that it has been applied, the bark looks unhealthy; in some parts utterly dead, in others pale and weak. In some fine green gage plums, the effects are very obvious—all the way down the trunk where the bark remains covered with the tar, it is entirely dead; in spots and strips which were accidentally left untouched by the tar, the bark is full of life—and these dead and living strips are side by side. Now this being the case, and such being the effect of this vile stuff, I think it highly improper for a man of Mr. Downing's reputation to publish such advice, giving it the sanction of his name. By following it I shall lose forty trees, I suppose, comprising some of the best kinds of apple and plum trees, which have had in my ground a growth of seven years. Thus besides the original expense and labor, I have lost, which is of vastly more consequence, the seven years growth. If you have any experience in this matter, or can give any information upon the subject, you will oblige me. Yours respectfully, A.

Cambridge, April 28, 1851.

Remarks.—Soon after the publication of Mr. Downing's work, experiments were made in the use of coal tar, and several cases were published in which it had the same destructive effects as named by our correspondent. We published these cases as a caution several years ago, and from the extensive publication of these cases, we supposed that its use was entirely discontinued; but in addition to the preceding case, a gentleman informs us that he has lost fifty apple trees this year by the use of coal tar.

A Mammoth Tree.—On the land of Mr. Rife, three miles from Hagerstown, Md., near Salem Church, stands the dilapidated trunk of a hollow sycamore tree, the circumference of which is, at the ground, thirty-nine feet two inches. The Hagerstown Herald says:

"The cavity is entered by an aperture which ad-

mits a man without stooping; and the inner diameter averages eleven feet four inches. Mr. Gelwicks and twenty scholars, from 8 to 17 years old, stood in a circle of one deep on the extreme of the circle of the cavity, and an additional number of from fifteen to twenty might have stood within."

For the New England Farmer.

AGRICULTURAL SCHOOLS.

Mr. Editor:—What benefit may be derived from agricultural colleges in Massachusetts remains to be tested by experiment. The student of agricultural books, without practice, can no more become a farmer than the carpenter could a good workman by reading books of architecture. The tendency of a protracted course of study at any college or public school is not favorable to habits of industry, especially to create an appetite for practical labor, however enthusiastic the student may be in theoretic notions. A lad or young man, even if he has been accustomed to labor, retires from it and enters a school or an academy; he soon becomes debilitated, and loses that firmness and vigor of muscle which he retained while he continued to labor, and after a while, as langor and debility increases, by a sedentary life, a dislike, then a dread, and at length in some cases an abhorrence of labor takes place in the pupil, whose mind is often as much enfeebled as his corporeal part. This I know by experience.

There are other considerations which would render the utility of agricultural schools questionable; the pupil forms new acquaintances, he imbibes new ideas, and is exalted in the scale of being, in his own estimation, and ascends to a higher grade, and if he gains knowledge of good, he is full apt to contract habits and visionary notions and theories from his associates, which would not have a tendency to make him an industrious farmer. The boy that is educated to fill a professor's station, will commence life with high expectations, and the idea of high life will take possession of his mind, without any adequate means of supporting himself in his imaginary self-conceived important standing, and he would be as liable to make a "compromise" with his creditors as the merchant himself.

How a poor graduate from an agricultural college can sustain himself without labor would be a puzzle to all practical farmers. There are but very few farmers but what would prefer to be their own professors, instead of paying a salary equal to supporting one of these graduated scientific students. A better plan would probably be to settle him down a dead set upon the parish. The public is now burdened with hosts of unnecessary professional men, office holders, office seekers, mountebanks and would-be somebodies, which are like the horse-leech, never satisfied, but cry more money, more money, and are actually squandering the hard earnings of the industrious portion of the community in extravagances, under the pretext that their services are indispensable to the public good.

How long the community are doomed to suffer the impositions of these supernumeraries, and have their little pittances extracted from their pockets by unprincipled pretenders which are flooding the country and committing indiscriminate depredations upon the credulous, unsuspecting multitude, is beyond the knowledge of the present generation to prognosticate.

I think a school endowed with professors for the detection of impostors would be quite as much to the purpose, and as conducive to the public good, as a college to instruct boys to hoe corn and weed onions.

The process to go through to become a good practical farmer requires time, accurate observation, and habitual labor from day to day, till love of industry becomes second nature. After a boy has been well instructed in the several branches taught in our excellent district schools, I know of no better course he can pursue to extend his knowledge of farming than reading the agricultural papers of the day, filled with the productions of able and enlightened editors, and communications of practical and observing correspondents. The expense would be but a trifle when compared to a protracted, debilitating, dissipating course of study at a school whose professors might be more ignorant of practical farming than the pupils themselves. No ambitious young man desirous of information, as every farmer ought to be, will spend his leisure hours moping about or loafing at grog-shops, when he can be storing his mind with useful knowledge which he can derive from such a source. If a farmer wishes to have his soil analyzed, it would be abundantly cheaper to employ a practical chemist to do it than fit himself out with the necessary apparatus, if he were competent to perform it himself.

All New England farmers know that the income of their farms is not adequate to paying the price of labor, and supporting a superintendent, educated at an agricultural college, from the sale of his crops; this may be done in Europe, where the laborer does not draw wages enough to pay his board in America. The superintendent here, whether he is proprietor educated at an agricultural college or otherwise, has got to exercise his muscles like a man instead of dictating a group of half-starved peasants. I am among the last to discountenance any institution for the dissemination of useful knowledge, but to suffer a burdensome tax to be laid on the people of this commonwealth upon a project which at best looks more like multiplying a new horde of professors to leech the farmers than render them any permanent benefit, seems an act destitute of that wisdom which the old Bay State has been renowned for in past time.

Wilmington, May, 1851. Silas Brown.

Remarks.—For some years past we have occasionally received communications from Dr. Brown that have been marked with solid sense and accurate observation, therefore we give him a hearing, though we do not endorse all his views, and though he is very severe in some respects.

The article contains important truths, which the advocates of agricultural colleges in their zeal for a splendid establishment, (and we might say expensive one too,) seem to have over-looked.

At the late Agricultural Convention, where this subject was discussed, the utility of agricultural papers was not mentioned, if we remember; and the speakers, composed of delegates from the several agricultural societies, claimed, generally, that what little improvement had been made was accomplished through the influence of those associations.

Notwithstanding the favorable influence of societies and other means, it is generally allowed by the most intelligent farmers that books and papers on agriculture have been the most effectual means of enlightening farmers, as by them the most reliable and valuable information among the best practical farmers is collected, and then disseminated widely over the land. The farmer, even of humble means, may sit down in his own retired home and consult the most skilful farmers in different parts of the country, and learn what they are doing. If he would have more light on any subject, he can call it forth, for farmers, more than any other class, are ever ready to communicate, and *freely* too. The idea that a student of an agricultural school will soon learn to analyze soil, which seems to exist in the minds of many, is a ridiculous one, and shows that those who possess it do not understand the subject. As well may a student of a school learn the English grammar in two or three weeks, or get a good knowledge of Greek or Latin in a month or two. No person can analyze soil until he becomes a thorough chemist, and has much experience in the manipulations of the laboratory, and in addition he must have a sound and discriminating judgment. We appeal to those who can analyze soil for the correctness of our statements.

Those who contend for the immediate establishment of splendid and expensive schools as the most effective means to promote agricultural education, are less familiar with the practical operations of farming than our most skilful cultivators, have schemes so Utopian, that something in opposition as a salutary check is necessary to save the public coffers from excessive drainage.

For the New England Farmer.

THOUGHTS ABOUT POTATO ROT.

Among many men it is very natural to suppose that many minds will be found to speculate upon a subject of importance, while it remains true that no one is able to settle the mysterious question to the satisfaction of others. Thousands ask the question, "What is the cause of this fearful evil, the potato rot?" Many attempt to answer, but very few, if any, are entirely satisfied upon the subject.

A general answer, which seems most entitled to credit, in the opinion of thinking men in general, is, "The cause of the disease is atmospheric." To this answer the writer has been inclined to give at least *some* credit. But it is not satisfactory.

If the original cause is in the atmosphere, another question arises. Is it in the *temperature* of the atmosphere, or in the *dryness* or *dampness* of it?

All my investigations fail to satisfy me that the temperature of the atmosphere, aside from other circumstances, has anything to do with introducing the disease. If we have a dry time when the tubers are forming, it may be very warm or very cool, it matters not which, the potato is sound and healthy.

The effect of dampness or wet claims an inquiring thought. Is the dampness of the atmosphere a producing cause of the disease? To me it is not evident, for the whole time that the tubers are forming may be wet weather; but if it is also cool, potatoes will usually be sound.

The potato has heretofore been raised without any difficulty of the kind now under consideration in very hot countries. It has also been raised upon the islands of the sea, where the atmosphere is almost always filled with dampness.

If the cause is in the atmosphere, does it float in the atmosphere, and thus strike upon the leaves and stalks of the plant first? Or does it first produce an effect upon the soil, and rapidly extend its deadly power, through the plant? If the former, there are difficulties in my way which perplex me. First, I cannot see why potatoes which grow within a few feet of each other, and the same kind and quality of seed, should fare so differently. In 1847 I observed a case as follows. An individual planted some potatoes in a piece of ground through which was a narrow foot-path. The hills on the opposite sides of the path were not more than five or six feet apart. The potatoes on one side were all sound, the stalks ripening in due time, while on the other side of the pathway a large portion of the tubers were diseased. There was this difference in treatment; on the side where the tubers were sound, during the dry weather in July, soap suds from the washing room had been poured upon the hills; thus giving the ground some properties which the hills on the other side did not possess. My suspicion is that the *warm and wet* weather, when the rot appeared, produced a fermentation in the soil, producing a gas which is deadly to the potato.

The second instance which it appears proper to introduce, is of a farmer in 1848, who put ashes upon his corn hills, and when he finished his corn, started for his house with a bucket or measure nearly full of ashes, and through the middle of a potato field ashed two rows of potato hills freely. At the time of digging his potatoes, the two rows were subject to disease only in a very slight degree, while a large proportion of the potatoes were worthless on both sides of the two rows. My suspicion is that the soil was subject to an acid fermentation during the warm and wet season to which was ascribed the potato blight, and that the alkaline properties of the wood ashes applied served materially to check and destroy its power.

In a garden, in 1848, in a low and wet corner, where the soil was evidently very liable to such an effect as I feared from the warm and wet weather that might come on in August and September, I thought it not safe to plant potatoes, and therefore sowed flat turnips and some ruta bagas. Within thirty feet of them I planted some potatoes, but upon a soil which was judged to be capable of easier protection from the dreaded evil. The potatoes were perfectly sound, but the turnips were nearly all subject to a hard and black rot, when I pulled them, and were worthless. My opinion is that water rot will produce potato rot, in certain circumstances. I say, my *opinion*, but I mean only my *suspicion*, for I dare not yet form an opinion fully upon such a difficult and perplexing subject. By *water rot*, is meant that fermentation or change which water undergoes, producing an offensive smell, and so forth, which men of science have often proved, seamen have often suffered from, and practical men have known.

In a close, rich, and warm soil, water, falling in

rain, is subject to a chemical change in a very short time. In an open, sandy soil, it is not subject to such an immediate change; and as it runs through silica, it is subject to a continued purifying action. Again, the water which descends into a sandy soil is still to a degree subject to atmospheric influence, which serves to keep it sweet. Every one knows, or every man ought to know, that water in a well will not remain so pure and sweet, if undisturbed, as it will be if it is often thrown open to the atmosphere by the plunge of the bucket. Water is hardly fit for the use of man, in a well from which none has been drawn for a long time.

In 1850, when the first indications of disease appeared upon my potato vines, I went into my field of potatoes and selected a spot where I thought the circumstances of the soil were most unfavorable for the health of the potato. I opened several hills and found the tubers almost entirely rotten and soft. I went to other parts of the field, where the soil was sandy, the tops of all yet mostly green, when I found upon the surface of some of the tubers numerous little specks of whitish frothy matter, which upon close examination I found to exude from the tuber. Upon cutting the tuber I found the portion next the skin to be absolutely subject to decay, but retaining its usual color, or nearly so. I have not been able to discover that the stem or root leading from the stalk to the tuber, in such cases, gave any fair signs of conveying the disease to the tuber from the stalk or tops. As far as my observation has gone in the matter, I have found no proof that the part of the tuber most immediately connected with the stalk is the part affected, in potatoes but partially diseased. It is an easy matter for a man when digging potatoes to satisfy himself upon that point.

If some have thought they had saved their potatoes from rotting by pulling the tops when they began to be affected, they have thereby opened the ground to a greater degree of atmospheric influence, which it is necessary to consider.

This article has become longer than was intended in the beginning of it, and the further consideration of the subject must therefore be postponed.

With a desire for truth and understanding, I will subscribe myself, c.

Mason, N. H., May 10, 1851.

CULTIVATION OF SAND HILLS.

At a recent meeting of a society in Liverpool, some papers were read by Mr. R. V. Yates, relating to the mode used in Flanders for reclaiming sand hills—a mode which we think might be used with benefit in some parts of our own State. The face of the country near Dunkirk naturally consists of large sand hills blown up by the winds. The first thing to be done is to level these heaps into an extensive plain, with divisions into large fields. Then they bring, from the sides of some extensive lakes of sea water, an argillaceous soil, and with this they cover the plain of sand to the depth of two inches or rather more. The chief object of this is to prevent the sand from being blown about by the winds; it is also useful in preventing the manure from sinking into the ground too rapidly. The plough is then used to the depth of about four inches, and thus the argyle, or clay and sand, are mixed. Then the fields are well manured, and the first year they yield a good crop of potatoes, the second year barley, the third year lucerne. Potatoes and lucerne thrive particularly well in sandy soil, and the lucerne, especially, flourishes in a most remarkable manner. Potatoes thus grown have escaped the disease when others not grown on sandy soils have suffered by it.

Another mode of covering the sand with argyle is as follows:—Under the sand, at a depth of from four to eight feet, is found a layer of argyle. This is subsoiled; a broad trench is made to the bottom of the argyle; then the sand is thrown to the bottom of the trench, and the argyle thrown on the top of the sand; so they work on regularly, throwing the sand below and the argyle above.

A large proportion of the land in the neighborhood of Dunkirk is used for gardens, and produces the most excellent vegetables, both for town and export—cauliflowers, peas, turnips, carrots, potatoes, &c. But the conversion of the sand hills into these gardens has for the most part been the work of a long, long time; still, however, some additional plots are continually gained. They go on using manure in the same way from year to year, and it is said not to sink into the sandy soil.

At Calais there is a cultivation of the sand hills, partly similar to that already mentioned. There are opposite the town, (on the side of the river next the sea,) about fifteen acres belonging to the government, who will suffer them to be used as pasture. The sands are levelled by laborers, and then covered to the depth of half a foot with argyle, which is dug in with a spade; they are then manured and sown with lucerne, and protected, though very imperfectly, by low fences of reeds, poplars and willows.

In some parts of England the earth, after being covered to the depth of two inches with clay, or rivet mud, is sown thickly with star grass, which being planted three or four inches deep, throws out a great number of fibres, and the roots become eight or ten feet long. The sands are bound very effectually, and in two or three years the ground becomes quite green with this plant.

These modes of reclaiming and fertilizing sandy soils strike us as being thoroughly practical, and well adapted to the use of our own farmers, or more particularly to the inhabitants of that hitherto sterile district, Cape Cod. The clay or muck can always be procured with but little trouble or expense from the low swamps of the interior, and we doubt not the land-owner would be well repaid for his labor. At all events the experiment is well worthy of a trial.—*Journal.*

THE SHAD BUSH AND MOUNTAIN ASH FOR PEAR STOCKS.

The common shad bush, or, as it is sometimes called, "Planting Bush," and also called by many Swamp Pear—Pear berry, (*Aronia ovalis* of botanists,) has been found to be a very good stock into which the pear may be grafted, in order to make dwarf trees. This is abundant among us, and will soon be throwing out its profusion of white blossoms, in all parts of the State. Those who are desirous of trying the experiment are reminded that now is the time to do it.

The common mountain ash, which is so abundant in our low woods and swamps, makes a very good stock for pears. Those who may have them already growing in their yards or pleasure grounds can now put in a graft or two into their tops, and in a couple of years be rewarded with a crop of pears instead of little berries.

CANADA THISTLES.

The subject of Canada thistles is often spoken of, and the modes of eradicating them suggested. But some who have succeeded in destroying them once, do not seem confident that the same mode will always be equally efficacious. Now a word on this subject. I have been greatly annoyed with thistles —have supposed it impossible to extirpate them— have mowed them in all times of the moon—have salted them—and have ploughed them two or three times in a summer—and still they have been the victors. And they will continue to be the victors, whenever the ground is tilled, unless the design and determination is to till them to death. If ploughing is the mode resorted to, it will be absolutely effectual in a single season, if repeated so often that the shoots cannot come to the surface and there enjoy the light and heat. But if ploughed only once or twice, or even thrice, in a season, and the shoots be permitted to come to the light, and grow two or three inches, it amounts to nothing more than a transplanting of the root. A broken piece of root, only three or four inches in length, will send up a shoot almost equal in size to the root itself. I am confident that in breaking the roots in ploughing our summer fallows and other grain fields, and scattering the pieces by the harrow, the plant is spread more than by the scattering of the seeds on the wings of the wind. In hoed crops they can be entirely destroyed in a single season, by going through the field as they appear, and with the hoe cutting them off a little below the surface. But even then, the inch of the root thus cut off must be turned up so as to wilt and dry, or it will continue to grow. In small patches, as in the garden, and ornamental grounds around the mansion, I have entirely destroyed them in a single season by cutting them below the surface with a weeding trowel, as often as they appeared. The process of repeated ploughing as stated herein, when the patch is extensive, or the use of the hoe or towel, as suggested above, can be confidently relied upon as entirely effectual. —*Genesee Farmer.*

Remarks.—We have tried many modes of destroying the Canada thistle, and the most effectual mode, and the most economical, when it can be conveniently attended to, is to put the land to mowing. The first year there may be a pretty good crop of thistles with the grass, but cut as soon as they are in blossom and horses will eat them. After the first year, but few will be seen, and in a few years they will be all gone.

No matter whether the land is in pasture or tillage, put it to mowing and the effect will be the same. But thistles may be mowed for years, in pasture or tillage, and several times a year, without destroying them.

IVY ON BUILDINGS.

It is a mistaken idea that ivy renders a structure damp, and hastens its decay. On the contrary, nothing so effectually keeps the building, as may be seen by examining beneath the ivy after rain, where it will be found that the walls are dry, though everything around is deluged with wet. Its exuberant and web-like roots, issuing as they do from every portion of the branches, and running all over the surface on which it grows, bind everything together that comes within their reach with such a firm and intricate lace work; that not a single stone can be removed from its position without first tearing away its protecting safeguard. In proof of this, we refer to ruins of ancient castles and buildings; for, while in those parts of the structure that have not the advantage of this protection, all has gone to utter decay; where the ivy has thrown its preserving mantle, everything is comparatively perfect and fresh, and oftentimes the very angles of the sculptured stone are found to be almost as sharp and entire as when first they came from the hand of the builder.—*American Agriculturist.*

SHEARING LAMBS.

Some flock-masters recommend the practice of shearing lambs, but I have my doubts as to the utility of divesting young animals of their fleeces, though, perhaps, in certain cases, they would be far better with it off than on. This, indeed, may be the fact when they are infested with vermin; or when, having come early the preceding winter, their fleeces may render them uncomfortable in the sultry and close days of June and July. But would not the comfort thus secured to them in hot weather be purchased by a more than commensurate degree of suffering when it becomes cold? As to the "tick evil"—a sore one it is true, when unmitigated by remedial appliances, and one that, perhaps, will sooner exhaust the vital energies of its victim than almost any to which these innocent animals are exposed, I would recommend either New England rum or tobacco smoke—the former applied as a wash to every part of the fleece and skin, and the latter as a fumigation, blown into the wool by means of a "smoker."

The application of either of these will immediately rid the animal of their parasitical enemies, and without involving any unpleasant results. Lambs that are of good size by the last of June or the first of August, may furnish quite a good fleece; but the value of this is a mere trifle in the estimate, if its removal is to operate unfavorably to the animal's health, which I think it inevitably must. B.

Bensalem, April 21, 1851.

Germantown Telegraph.

ASHES AS MANURE.

The true value of ashes to the farmer has long been unknown, and even now is just beginning to be appreciated. The soap-boiler's agents have long been allowed to carry away the most valuable fertilizer produced by the farmer, and leave in return poor brooms and worse tea. Many an anti-book farmer has hauled plaster miles to his farm, and paid a high price for the same, when there was no lack of the element in his soil, and he was but "carrying coal to Newcastle," while at the same time he sold his ashes at 10 cents per bushel, *nominal price*, his soil being exhausted of potash. It is no wonder that his lands should become "worn out," and himself exceedingly dissatisfied with the seasons and moon.

Every plant contains inorganic elements which are, as all know, indispensable to its growth; these elements are the ashes of the plants. Those resulting from the combination of wood contain many of the most important constituents of both the grains, grasses and roots. Wheat and corn contain a large

proportion of potash, consequently ashes are a most valuable manure for those crops. Fifty-nine per cent. of the ash of corn is composed of the carbonate of potash (pearlash.) The abundance of this ingredient in wood ashes constitutes their great value as a fertilizer for that important crop, which value as a general rule is double that of plaster. I have used both, separately and mixed, and find that a compound of two bushels ashes and one of plaster give a better result than either when applied singly. I take a small shovel with which I put about 1 gill upon each hill; I carry the ashes into the field upon a barrow, and use a pail to distribute them from.—The best method of application, is to put it on the hills immediately after planting, which precludes the possibility of injuring the young plants, as is sometimes done by applying the mixture after they have come up. Corn to which this mixture has been applied, will ripen several days earlier and give a much greater yield than rows through the same field which are not so treated.

One half of the earthy matter of potatoes is pure potash, from which fact any person can see their value as a fertilizer for this crop. It is from a lack of potash that many farmers lose from 50 to 100 bushels of potatoes per acre every year. If a farmer has in his soil potash enough to form 200 bushels of potatoes per acre, and other constituents sufficient for 300, it is evident that the result will be a loss of 100, which the application of ashes would have prevented. Such cases often occur. Yet, in a ton of potatoes there is but 12 pounds of potash; thus it will be seen that the cost of the ashes necessary for the production of the other 100 bushels would have been but trifling.

Ashes should never be mixed with barn-yard manure, as they contain caustic alkali, and will neutralize the acid which fixes the ammonia in the manure, setting the latter free to the great depreciation of the value of the manure. I will conclude by advising my readers to save your ashes, *not for the soap-boiler*, but as food for your hungry crops, and if you have any neighbors who prefer 12 1-2 cents to a bushel of ashes, you will find it a profitable investment to make the exchange. A. G. K.

Dollar Newspaper.

CORN CROPS.

The following are statements of corn crops presented for premium to the Franklin Agricultural Society:

I submit to your society the following statement of the produce of an acre of corn raised on my farm the past season. The accompanying certificate will show the quantity per acre, and the mode of ascertaining it.

The soil is a stiff, heavy loam, not well adapted to raising corn. A thick grass sod was turned under in the autumn of '48. The field was planted with corn in 49. Eight cart loads of compost manure were put in the hill. Last spring 22 loads of long manure were plowed in, and 8 loads of compost put in the hill. It was planted the first week in June—the rows 3 feet and 4 inches apart, hills 2 feet 6 inches—hoed three times, a cultivator used at each hoeing. Care was taken to destroy all weeds, and to keep the surface level as possible. The ground was very wet when planted, and for some weeks after, which seriously injured the crop. Top stalks cut the last of September—the bottom stalks with the corn cut up the 8th of November. Produce eighty-four bushels. The compost put in the hill was a mixture of stable manure and swamp muck in equal parts—the mixture lying over one season under cover before used. The long manure was mostly brakes on which sheep had been yarded during the winter and spring—carted on to the field when wet, and ploughed under with as little exposure to the sun as possible. I do not consider this a large crop. I have had with the same cultivation in favorable seasons one quarter more. Very respectfully,

Austin Rice.

Statement of D. & H. Wells.

Broke up a piece of grass land the 10th of May, spread about 25 cart loads of green manure to the acre, which was well dragged in. Then manured in the hill with green manure, about 10 cartloads to the acre. A little plaster paris was sprinkled on the manure before planting. Planted the corn the 20th of May, hills 3 feet apart each way. Hoed 3 times. It was cut up the latter part of September, and harvested the last of October and the first of November. The result was 105 baskets full of sound corn on 172 rods of land. Spread some of the corn on the corn house floor to dry. Shelled 1 basket full the first of December—it contained 1 bushel and 3 pints to one basket.

This will make 109 bushels, 3 pecks, 5 quarts, or 102 bushels, 7 quarts, 1 pint, on an acre.

FACTS FOR THE CURIOUS.

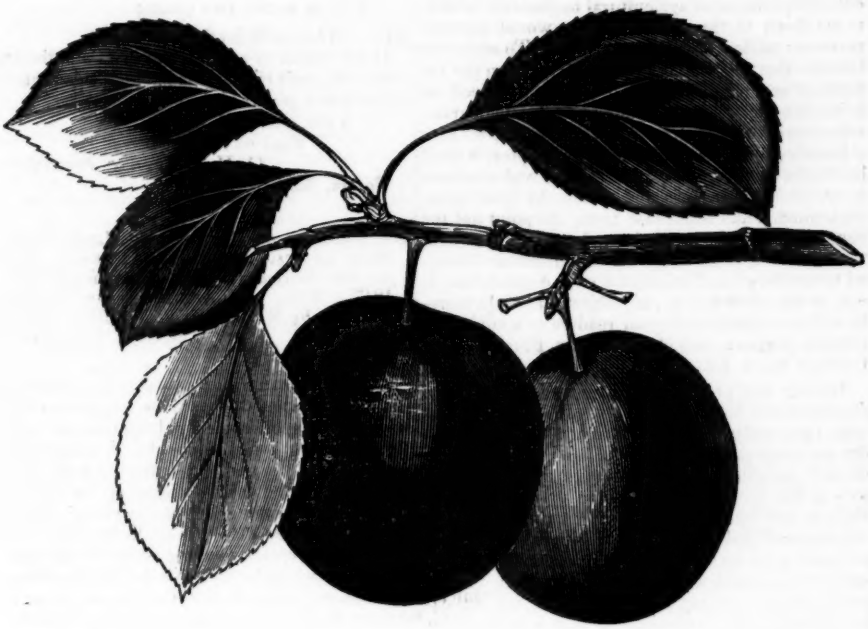
Close in the vicinity of Hudson is an apple tree, which to my mind is quite a prodigy in the world of nature, bearing as it evidently does some five or six entirely different species of fruit, all interspersed throughout the tree; so that upon the same limb are found fall, early winter, and three or four grades of late winter apples. Those keeping the best, are good as late in the season as April.

The apples are generally fair, of good size and an excellent flavor. This latter quality, however, with the color and shape, vary in the different species according as they keep for a longer or shorter period. Those ripe in the fall are of a reddish color and flat, and will not keep more than two or three months; while those which keep till February or even later, are much sourer, of a yellowish green color, and long, so that the diameter of the apples are completely reversed. There are about six different grades. The change from one to the other is but slight, yet sufficient to indicate with a good degree of definiteness the class to which each apple belongs. Those which become fit for use in December are considered the best.

The tree is a graft inserted when the stock was small, by sawing of the top. Its branches do not shoot upwards as in the case of most trees, but extend out horizontally. Grafts from this tree have been inserted upon two different trees in a neighboring orchard, and produce the same kind of fruit in all respects, and a similar top.

Such are the facts relating to this singular tree. Who will give an explanation of them?—*Family Visitor.*

☞ Teach children to love everything that is beautiful and you will teach them to be useful and good



ITALIAN DAMASK PLUM.

As this plum is rather early, and a good bearer, it is a very good variety, particularly for the market, as it comes in at a season when this fruit is not very plenty.

Medial size; nearly round; slightly flattened at base; suture distinct, passing from base to top; violet, changing to brown when very ripe; stalk half an inch in length; slender; cavity small; flesh yellowish-green, firm, sweet, high-flavored. Freestone. Last of August and into September.

Middlesex, Ct., Agricultural Society.—We have the show-bill of this association, containing the list of premiums, regulations, and officers of the society. The cattle show will be held at Middletown, Oct. 1, 2, and 3. Charles Hubbard, President; Linus Coe, Secretary.

Indefinite.—A reader inquires "what will cure poison internally." Now we do wish that those who make inquiries would let us know what they mean, and not be so indefinite. What poison does "A Reader" refer to? and does he refer to an internal poison, or to an internal remedy?

Ancient Farming.—It is stated in an article on this subject, in the July number of the London Quarterly Review, that the average product of wheat in the home provinces of Rome, in the time of Varro, was 32 bushels to the acre, far more than the present average in Britain, and probably three times as much as that of the United States.

For the New England Farmer.

THE VETERINARY ART—POISONING WITH WHITE LEAD.

Mr. Cole:—Dear Sir—The veterinary art, which has for its object the restoration from disease of some of the most noble specimens of God's workmanship, is at the present time most sadly neglected. How long our citizens will suffer this most important branch of study to be neglected, remains to be seen. Judging from the rapid improvements that are daily making in every other department of science and skill, surely at no very distant day New England will follow in the footsteps of the mother country, and the sons of the former will be able to say that America can boast of her veterinary colleges—that as the car of progression rolls so gracefully over her extensive territory, scattering in its train untold blessings and converting the home of man into an earthly paradise, that in the midst of such enjoyments he is not unmindful of those who, though our slaves, have common feelings with us.

I need not remind you that the poor dumb brutes, of whom I write, have common feelings with us—that they think and reason as we do—that their faculties of perception differ not from ours, only in degree. This is a familiar subject to you. In your editorial capacity you have furnished the world with abundant evidence that you believe—

> "When crime is sentenced, man shall not
> Go unrewarded, because no tortured brute
> Stands there accusing,"

and that—

> "Our Father careth when a sparrow dies."

You have done much towards rescuing our domestic animals from the barbarous and cruel modes of medication hitherto practiced by the "*hereditary*" horse and cattle doctors.

I was led to make these remarks in view of the

great loss which this country sustains, in this peculiar department of agricultural husbandry; which, to set down at the lowest figures, would approximate *one million* of dollars annually! To show the benefits that this country would derive from the veterinary art, when, instead of being practiced, as it is often done, by the ignorant and intemperate, who assume the honors of the profession, without a knowledge of its fundamental principles, it shall be taught in our public institutions, and practiced in a spirit of kindness and mercy, by intelligent, high-minded and honorable men,—to point out the benefits arising from a definite knowledge in relation to this science, which has hitherto been shrouded in mystery, and associated with degradation, is not, at the present time, my object. I would merely call the attention of your readers to a subject of great importance, which is, — THE POISONING OF CATTLE WITH LEAD.

During my professional career, many cases of disease in the brain—spinal marrow—nervous system, (generally,)and of the stomach, have come under my observation, when in some cases the cause of such maladies were as obscure and unsatisfactory as the treatment. In some of these cases it came to my knowledge that the animals were in the habit of licking painted buildings, and tearing off small portions of wood, on the surface paint, and *carbonate of lead* was detected. At that time it never entered into my mind that sufficient carbonate of lead could be obtained in this way to poison cattle, yet I have generally supposed that the article, even in minute quantities, was capable of impairing the physiological operations of the animal; yet knowing that the *vis medicatriz natura* was efficient under ordinary circumstances to restore the balance of power when occasioned by trifling causes, I admit that I did not give the subject that attention which its importance demands. I shall, however, for the future, pay more attention to the subject. This poisonous mineral may, like arsenic, &c., &c., (although introduced into the system in very minute doses,) accumulate there and produce its specific results. It makes no difference whether an animal obtains carbonate of lead from the sides of a painted house, or barn, or if he shall imbibe it at the trough supplied from leaden pipes. The result is the same, provided, however, lead is found to accumulate in the system. And who doubts it? See that young man in the prime of life, (a painter,) suffering from paralysis and rheumatism—his nerves unstrung—living, yet half dead, suffering all the horrors of our great national disease—dyspepsia. Ask his opinion of the matter. It does not enter his system in the same manner just alluded to, (by the stomach,) yet in as certain a manner it enters his system through the medium of absorption and circulation, and is finally deposited in a tangible form within the cellular tissues. The following communication from the "London Veterinarian," (the editor of which is a man distinguished for his veterinary talents,) is worthy the attention of your numerous readers.

The best treatment I know of with a view of counteracting the effects of carbonate of lead in cattle, is to give as an aperient one pint of olive oil, and if that does not operate at the end of twelve hours, another dose may be ventured on; in the intermediate time a generous supply of weak lemonade may be allowed. The following injection may be given:——

Powdered Indian turnip, one ounce;
Boiling water, two quarts;

Mix. When sufficiently cool, inject.

If the animal is evidently in pain and the excrement soft, omit the lemonade, and substitute a tea of powdered poplar bark.

I am, Sir, with respect,
Your ob't servant,
G. H. DADD, *Vet. Practitioner.*

Boston, May 15, 1851.

THE POISONING OF CATTLE WITH LEAD, *popularly known as* STAGGERS OR HEAD DISEASE. *Read before the Veterinary Medical Association, Edinburgh,* 1847. WITH AN APPENDIX AND ADDITIONAL NOTES. *By* M. CUMING, *V. S., Ellon.* Pamphlet 8vo, pp. 28. Avery, Aberdeen; Sutherland and Knox, Edinburgh.

A medical man never experiences greater satisfaction than when his anxious searches after the origin or cause of some fatal sporadic or endemic disease among living beings, be they men or animals, have in the end been crowned with success. Having made the desired discovery, he exclaims in ecstasy, *J'ai decouvert le pot aux roses!* He feels as though he had the lives of those still living in health in the region of the pestiferous agent at his command; while he loses his regret for those that have fallen victims to it in the joy he experiences at their dead bodies having auspiciously furnished him with the knowledge by which he is empowered to save others from the same grave. The disease, the subject of the pamphlet before us, had been rife, and as fatal as rife, in the part of the country in which Mr. Cuming practised. During May and June, 1845, his attention was first called to it. Ten or twelve cases of what were called "staggers, or head disease," occurred, which at the time appeared to him "most anomalous." Animals were taken unwell; from being slightly became alarmingly ill; and in from thirty to sixty hours afterwards were dead corpses. And to render matters worse, their opened bodies exhibited but the appearance of lesions of too trivial a nature to warrant deductions from them of any practical or useful description. Although there was not that uniformity of symptoms and post-mortem relic, however, which epidemic diseases are wont to bewray, yet did there exist, on reflection, sufficient "points of coincidence" to suggest the inference that in all the same indentical cause had been in operation.

"I had seen," says Mr. Cuming, "the same disease frequently before, although I had never had to do with treating it. It is no stranger in the district where I then practised, as I could reckon up, upon the authority of the owners of the animals, as many as *fifty fatal cases of it within the circuit of three miles, and a period of twelve years.* By the farriers in the quarter it is called 'the ill trouble,' and allowed to pass as a visitation with which there is no use contending. And in other districts it is popularly known as the *head disease, staggers, wudness in the head, &c.*, names graphically characteristic of the symptoms observed."

Being called in, ignorant as he was of the nature of the malady and hopeless of its cure, Mr. Cuming was, as a matter of course, expected "to do something." He tried one remedy; he tried another. All to no purpose; the patient died. He

essayed another and another plan of treatment. Still the patients died.

"Time rolled on, and the month of June, 1846 brought with it a recurrence of the disease on the same farms as before, and with all its former fatality. I applied to its treatment all that the previous year's experience and the thoughts and inquiries of the intervening twelve months had suggested; but, as usual, death in most cases closed the scene. I was, however, determined not to give up. I had observed in all the cases I examined in the summer, 1845, as a thing worthy of being noted, but nothing further, that there was a large quantity of earthy matter—sand, pieces of brick, tiles, leather, &c.—in the passage from the second and third to the fourth stomach; and in one case I collected and washed a portion of this foreign matter and laid it aside, thinking it of no use, however, but as a cabinet curiosity. In summer, 1846, I invariably met with the same appearance, and on inquiry was told that all the beasts affected had been addicted to eating bones, old shoes, rags, or whatever trash they could get hold of. In making a post-mortem examination of the last fatal case of the disease which I saw, I was struck by the appearance among the earthy matter in the stomach of small particles of a soft, white, putty-like substance, and the idea of white paint (*carbonate of lead*) immediately came into my mind. I collected and took with me a portion of this matter, and at the first convenient opportunity made an analytical examination of it; the result of which was, such a quantity of carbonate of lead as left no doubt of the cause of death, in this case at least. And on making an examination of similar matter taken from the stomachs of the previous year's cases, I found exactly the same results. Being now satisfied that I had found a solution to my two years' difficulty, I applied to the owners of the (dead) cattle for leave to exhume and examine two of them, on different farms, that had been buried without their stomachs being cut up. One of them had been eight, the other eleven weeks in the ground. I, however, managed in each case to obtain a portion of the contents of the stomach free from any admixture, and on subjecting these to analysis, had my views still further confirmed by the large quantity of lead I obtained."

For an account of "the physiological action" of the poison, which, owing to certain peculiarities in the structure and functions of the digestive organs in cattle are different in some respects from what they are in man; as well as of the "symptoms and post-mortem appearances," "treatment," and "analysis," we refer the reader to Mr. Cuming's practically interesting pamphlet.

It would not be doing the author justice, however, were we to conclude this brief notice of his work without setting forth, and in his own words, that "the claim" he rests upon is, "not that he has discovered that the salts of lead are poisonous to cattle; but that he has investigated and traced to its true origin an affection among this class of animals (cattle) of mysterious character; of general and extensive prevalence and extreme fatality, &c."

In an "Appendix," Mr. Cuming adds, he has since met with "a number of cases confirmatory of his expressed opinions;" and concludes with the following very pertinent remarks:—"Last winter a deal was written in some of the medical journals about a few poisoned partridges that somehow found their way to the London game markets. But the carcass of an ox or quey would outweigh a vast number of partridges, and it would not be difficult to tell of many such being slaughtered after being incurably poisoned, and finding their way in the shape of butcher's meat to the same city whence the poison had emanated: a curious instance, certainly, of retribution. It would be hard, however, to say that such meat was hurtful, until examination and experiment have proved it to be so; on the other hand, it would be equally unsafe to admit its being wholesome without sufficient investigation: and in treating the subject as I have done, I would have judged myself short of my duty to the public had I failed to notice this view of it. Having pointed it out, it is for others more interested to carry it further, if they think fit."

Remarks.—Some years ago, when conducting the Yankee Farmer, we had inquires for a remedy for cattle poisoned by licking buildings newly painted with white lead. Several animals were lost by this poison. We asked several medical men to investigate the subject, but they could prescribe no remedy.

We hope that the judicious remarks of Dr. Dadd on the veterinary science in this country will receive the particular attention of the humane and patriotic, and that some able and liberal gentlemen will do something to establish a school of veterinary science and practice. The saving of animals from disease, and curing them when ill, in the most skilful manner, is not only important as a matter of humanity, but as a matter of general prosperity and wealth to the country.

Dr. Dadd is well skilled both in the science and practice of the veterinary art, and we would recommend him to the consideration of those who want advice or assistance on this subject. The brute creation has been too long subject to the cruel treatment of ignorant pretenders, who not only know nothing of the important sciences of anatomy and physiology, so essential to successful practice, but they often pursue that severe course of practice which argues a want of common sense. —Ed. N. E. Farmer.

For the New England Farmer.

GOOD STOCK AND GOOD KEEPING.

Mr. Editor:—Noticing not long since a cut in your paper exhibiting the cow "Cambridge," with some remarks on the short-horned breed of cattle, you will allow the expression of some additional facts and the views of a correspondent. Aware that the freedom accorded to this New England state of society induces many persons to take the liberty of suspecting almost any man who advocates or disparages an object, article or measure, *warmly*, of being interested, or having selfish motives in so doing, and that to such the confident language of experience is labor lost, I have long since concluded to write less frequently, and less confidently. I entertain no doubt of the *justness* of

most of those remarks, nor as to your *general object* in editorial labor, to elicit and present the most reliable and useful matter to your readers, which I think is manifest by your closing remark, viz—"Our columns are open to our readers for the expression of their views, whether they are in accordance with ours or not."

It is some ten years since I purchased two of the best cows I could find of this breed—having for *years previously* taken my native cows out of town, and paid two dollars each for the benefit of a cross with a Durham bull. The first I bought at one hundred dollars was a very fat Roan, four years old, near to dropping her first calf. Her dead weight I computed at one thousand pounds. Her milk was considered the first best for richness and color. Though I have taken the *first premiums* in both Hampshire and Hampden Counties for different cows as *milkers*, I think this *Durham* surpassed them. I paid one hundred dollars for another cow and her calf one month old, and kept her till she brought me five calves. She was larger than the other, a good milker, and a better breeder. I have now a bull from her (coming 3) probably the best in the county, a picture of his sire, "The North American."

So far as I know, those who have bred this stock are satisfied with the best animals of pure blood as *paying well* for high keeping; considering their docility, early maturity, beauty and power as *working oxen*, and their ready sale at remunerating prices for this and the slaughter. I know of several cows that could not be bought for one hundred dollars *each*, and oxen each worth that for the yoke, and not less for fattening. When such cows and oxen have done, they cannot die in debt. The young stock, at proportional prices, pay handsome profit for raising. When a calf will bring from twenty-five to thirty dollars, at or under one year old, I think those serve society who introduce and encourage the raising of diminished numbers, of surpassing value.

I would recommend the keeping of bulls of the *best* blood, whether Durham, Devon, or other breeds, to *each town*. To able individuals, the same, with only prime cows, fattening all others. To those who keep a small stock or only one cow, *get the best* you can. Put her to such a sire and your calf will pay for *raising*, or will sell to profit, though a half-blood. Let every one lend his whole influence to improve the stock, the soil, the fruit, the mind and character of his neighborhood.

Every well-informed farmer knows that every rood of ground that does not *produce* or *improve* by culture or otherwise, equal to the outlay, is a loss of capital; or every creature in his stock or piggery that gains nothing and produces nothing, he loses all the cost of keeping. Common sense responds, the same is true of half-feeding, half-seeding, half-weeding, half-plouging, half-manuring, half-fencing, or do anything else to the halves. It is like half-catching a fish. If their growth, or milk, or wool but half equals their keeping, they lose in proportion. Hence it is manifest, if any kind or quantity of stock, or soil, or cultivation, will pay handsomely, each one should say, "that's the kind for me."

Yours truly,

Lancaster, 1851. BENJAMIN WILLARD.

Why is the Prince of Wales like a cloudy day? —He is likely to reign. (*Rain.*)

For the New England Farmer.

IMPROVING THE SOIL BY SUMMER TILLING.

MR. EDITOR:—I do not recollect of seeing anything in agricultural papers respecting improving the soil by summer tilling. I had a piece of pine plane, about four acres, which I ploughed in June, and in two or three weeks I harrowed it; and so I ploughed and harrowed it alternately, once in a week or ten days, till the first of September; then I sowed it with rye one bushel to the acre.

People that live near me thought if I had five bushels to the acre, I should do well; the produce was eighteen bushels to the acre. Ploughing and harrowing, I only worked while the dew was on; and I consider this of great importance. If we sow rye, wheat, or oats, in the spring, where we have summer tilled, it is best to get them in as early as possible. JAMES S. PARKER.

Leominster, May 8th, 1851.

REMARKS.—We have several instances of the improvement of soil by frequent tilling. A few years ago, a farmer promised us the results of his experience on this subject, showing that great success attended it; but he departed for some distant region before he could get time to prepare the article.

In connection with this subject, we would present for consideration the ploughing in of green crops; and suggest to experimenters to summer till half of a piece of land, and raise and plough under green crops on the other half, and see which will make the greatest improvement, at the least expense. On light lands, as they admit of early sowing, two green crops may be raised and ploughed in, in one season.

CARROTS FOR HORSES.

We have received the communication of W. R., who is mistaken as to our not having written on the use of carrots as food for horses. There are several articles in our early numbers on this subject, but as many of our subscribers have not our early numbers, we will give a synopsis.

Two bushels of oats and one of carrots is better food for a horse than three bushels of oats; and when used for light work, the quantity of carrots may be increased. With such food horses will enjoy good health and spirits, a loose hide, shining coat, and improved digestion. It may be thus explained:—The carrot is very nutritious, and, in addition, has the curious property of gelatinizing the watery solutions contained in the stomach of the horse. Carrots contain *pectic acid*, a single drop of which, when mixed with the juice of an orange or other fruit, immediately turns it into a jelly, and the Paris confectioners use it for this purpose. Soups in which carrots have been boiled are always gelatinous when cold, and are more easily digested when used as food, than soups otherwise made.

The bene plant has similar properties. A thin slice of this plant thrown into a glass of water, renders it ropy and gelatinous, and for this reason it is a specific for summer complaint with children.

By examining the dung of a horse fed in part on

carrots, it will be found to contain no undigested hay or oats, and therefore less quantities of those materials are necessary than when half the amount swallowed is parted with in an undigested state. For fattening animals the carrot is equally valuable, and for milch cows they surpass any other food. The milk of a cow at mid-winter fed on carrots, is equal in flavor to that supplied from clover in summer, while the butter made from the milk is finely colored and highly flavored.

In soils containing proper proportions of bone-dust, sulphuric acid, potash, and common salt, 800 bushels of long orange, or 1100 bushels of white Belgian carrots, may be easily raised per acre, while the same land will not produce one-tenth the quantity of oats. We have sold our crop of carrots this year to the livery stable keepers of Newark, at 50 cents per bushel, and we could have sold another thousand bushels or more at the same price.—*Working Farmer.*

FOOD FOR PLANTS.

A specimen of a soil of good appearance was given to Sir Humphrey Davy, from Lincolnshire, in England, as remarkable for sterility. On analyzing it he found sulphate of iron. He recommended a top dressing of lime; and the sulphate of iron was forthwith converted into the sulphate of lime; a noxious substance was at once changed into an object of fertility. It was the boast of Franklin that he had stripped lightning of its perils and chained the thunderbolt. Chemistry does more. Poisons are changed by its alchemy into the means of subsistence.

The Hon. Reverdy Johnson purchased, in 1849, a small farm near Baltimore, in the last stage of impoverishment. Such was its reduced condition that the last crop of corn was not more than one peck to the acre. He states that all the vegetable matter growing on the two hundred acres of cleared land, including briers, sassafras and other bushes, if carefully collected, would have been insufficient for the manufacture of one four-horse wagon-load or manure. He applied to Dr. David Stewart, of Baltimore, an able chemist, who rode out to the farm and procured specimens of the soil, which he carefully analyzed. He found that it contained an abundance of lime, potash, magnesia, iron and organic matter, duly mixed with alumina and sand. One element only of a fertile soil was wanting, phosphoric acid; and of this there was no trace. He recommended an application to the soil of the biphosphate of lime, a preparation of bones, as the best mode of supplying the deficient element. The remedy was given at the expense of ten dollars per acre. It was the one thing needful. Health was restored to the exhausted patient, and the grateful soil yielded last year twenty-nine bushels of wheat per acre to the proprietor. Nothing else was wanting. Here was a beautiful triumph of science. There was no doubt about the facts; the experiment came under our observation. It was detailed to the writer by Mr. Johnson himself.

☞ Major Amasa Stetson, of Stetson, the great dairyman of this county, brought into market on the 20th fifteen slaughtered hogs of his own raising, which averaged over four hundred pounds each.—This is believed to be the largest quantity of pork ever brought to market in one season, the product of a single farm. These hogs were purchased by our marketman, Mr. Rice, for which he paid over four hundred and forty-six dollars.

We have obtained a brief statement of the income from the farming operations of Major Stetson for the past year, as follows:

Received for butter sold, . .	$1807 73
" for pork, ...	446 33
" for pigs sold, ...	207 15
" for lambs and wool, . . .	64 75
" poultry, ...	23 71
	$2,549 67

The major has raised his own bread stuff and about fifty dollars' worth of wheat for the market. The amount paid out for labor has been about $600 00.

We like to record these facts as specimens of Penobscot farming.—*Bangor Courier.*

DISEASES OF POULTRY—ROUP.

We find in the March number of the *Genesee Farmer* a communication from R. H. Foster, of Lyons, N. Y., in which he says—addressing the editor—

"I take the liberty of asking you a few questions respecting a disease in poultry which has prevailed here this fall and winter to a considerable extent among dung-hill fowls. In the first place they appear stupid, their eyes heavy and almost entirely blind. In the next place there is a swelling of the neck and head, succeeded by a cough peculiar to hens, and making a noise as if partially choked. In this way they linger along two or three weeks, and either die or become very poor. During this time they discharge at the nose a viscid matter, in some few instances quite offensive to the smell. If you can tell us what the disease is, or what will cure it, you will oblige many of your friends."

Reply.—To this the editor of the *Farmer* makes the following reply:—

"The disease with which your fowls are affected, we should judge to be the *roup*, though a very different disease is sometimes called by this name. Fowls thus affected should be kept warm and have plenty of water and light food, such as scalded bran, Indian meal, &c. The English authors say give calomel in grain doses, made into a pill with bread, but we never had much success in "physicking" fowls. Washing the head in warm milk and water sometimes gives great relief, and if it does not effect, hastens the cure."

In the April number of the *Farmer*, we find the following additional notice of this disease, from L. Rogers, of Willowvale, N. Y., who gives the same name for the disease, and offers a remedy.—He says—

"Having noticed a letter from R. H. Foster, in the March number of the *Farmer* asking you a few questions respecting a certain disease in poultry, with which his neighbors' fowls have been troubled, I take the liberty of writing to you of the experience I have had in the same disease, which I called the roup. Last fall I purchased a pair of fowls of one of my neighbors, which showed symptoms of disease, which were the same as Mr. Foster speaks of. It soon went through my flock of twenty fowls, and for some time seemed incurable; but as a last resort, I mixed with about

four ounces of fresh butter, one tablespoonful of finely pulverised sage, one of rue, and one of soot, and gave each fowl a pill of this, about the size of a cranberry, once a day for three or four days; and within two weeks they had all recovered."

We would also remark, that the same disease was among our Polish chickens the whole of the past winter and in early spring, by which we lost several valuable fowls; also, that during the last six or nine months we have lost, evidently by the same disease, as it exhibited all its symptoms, full one-half of our stock of fancy pigeons. We shall try the remedies presented, should there again be occasion.—*Germantown Telegraph.*

PRUNING STONE FRUIT TREES.

It has been but a few years since the cultivators of fruit have been in the habit of pruning peach trees at the extremities of the branches, instead of cutting off limbs at the trunk. This system of shortening-in, as it is called, is gaining ground, and it is a great improvement. The reasons for this mode of pruning are evident on examination. Most kinds of stone fruit grow rapidly, and bear the greater part of their fruit on new wood, which is, of course, near the ends of the limbs. In this way a tree spreads over much land, and has naked branches near the trunk; and pruning at the trunk causes the gum to ooze out, which sometimes endangers the health of the tree.

On the contrary, by pruning at the ends of the branches, the tree is confined to a small space, the wounds have no unfavorable effect, or only affect the twigs, and not the trunk, and much new wood is produced for the production of fruit.

Great Agricultural Movement in Growing Flax in England.—A company comprising many of the leading nobility and land owners, is seeking from government a royal charter to give encouragement to agriculturists and farmers to bring into immediate cultivation at least one hundred thousand acres of land, for the production of flax straw; which substance the promoters of the charter have, (by new and peculiar processes never hitherto adopted,) the power to convert into a fit state to hold competition with the best flax imported from foreign nations, without the aid of steeping, kiln-drying, nor mill scutching. The machinery by which the fibre is separated from the stalk, without steeping, is of a very simple and inexpensive kind, requiring no previous knowledge to work it. The unsteeped flax is uniform in strength, and free from stains, so that all after processes of manufacturing and bleaching may be conducted with a facility and exactness not hitherto attainable.—*Agricultural Gazette.*

Skill in Farming.—Skill adds more to the profits of farming than hard work. In the article of butter, for instance, the same outlay is required, or nearly the same, to make a hundred pounds of poor butter, as would be required to make a hundred pounds of that which is good. But, when the articles are marketed, there may be $5 or $6 of clear extra profit in the pocket of the skilful dairyman. The importance of scientific farming is realized by those who have found such benefit as is noted above in every department of their labor.

Mechanics' Department, Arts, &c.

STONE WARE PIPES FOR WATER.

Eds. O. Cult.:—It is fair to presume that it is entirely within the scope of the objects of your paper to notice the various improvements of our time, even though they may not relate directly to the cultivation of the soil, or the raising of stock. The northern and eastern portions of the Union being mountainous or rolling, are happily furnished with running brooks or fountains in the hill sides, by which nearly every tract of one hundred acres is supplied with water. Not so, however, with Ohio and the western States. Here, that great desideratum, water, must, in numerous instances, be procured by cisterns or from springs or fountains, from which it must be conducted, often times, a considerable distance, to a convenient point for use at a dwelling, or for farm purposes. The cheapest and best method of conducting water has been a subject of much discussion, and will probably engross the attention of scientific men for a long time to come. Iron and lead have been generally used, notwithstanding the objections to the use of either of these materials. The first is expensive, and liable to corrode. The latter is also expensive, especially if a large size is used; and is said to be injurious to health. Hence it is very desirable to find some material to which none of these objections can be made. This I am strongly inclined to believe has been done by Messrs. Hill, Foster & Co., of Middlebury, Summit Co., by reviving the use of Stone Ware. These gentlemen now manufacture quite largely a very superior article of pipes, from clay which is found in that vicinity. I procured about six thousand feet of three and a half inch pipe, which was well laid by Mr. Charles Loudon, of this town, and the water has been passing through it since November last, without any appearance of discharge at the joints, or bursting of the pipes. This pipe is made in pieces two feet long; well *glass glazed* inside and *salt glazed* outside. The inside is very smooth, resembling the inside of a fine stone pitcher, presenting no obstruction to the free course of the water. The joints are cemented with water lime cement, which, on an examination a few days ago, was found, even at this early day, to be nearly as hard as common freestone. The fountain from which the water is taken is forty-five feet above the place of discharge at my house, and the surface of the ground over which the pipes pass is quite undulating. At one point on the line we cross a ravine where the pipes are seventy-six feet below the fountain. At this point, if any where, we anticipated difficulty in making them tight, or perhaps in the bursting of pipe; but after five months' use no defect has been discovered. The water, though very excellent at the fountain, is believed to be improved by passing through the pipes, which are laid two feet below the surface; which proves quite sufficient to prevent injury from frosts. I have great confidence that this material for conduits will prove exceedingly useful; and think the experiment I have made has been eminently successful. The manufacturers have put into my hands a certificate of six gentlemen, who state that they tested the strength of three inch pipe, and found it would bear a perpendicular column of water *nine hundred and forty-four* feet high *without breaking*. A second piece

of the same kind was subjected to a pressure equal to a column of water *one thousand thirty-four* feet high, before it broke. If this test was correctly made, and I am informed some of the gentlemen who superintended it were engineers, of science, it seems to leave no room for doubt, that this material is abundantly strong for all practical purposes. The manufacturers have furnished me a list of prices for which they will deliver pipe at their works, which is as follows: 1 inch pipe, 7 cents per foot; 1 1-2 inch pipe, 9 cents per foot; 2 inch pipe, 12 cents per foot; 2 1-2 inch pipe, 16 cents per foot; 3 inch pipe, 20 cents per foot; 4 inch pipe, 28 cents per foot; 5 inch pipe, 36 cents per foot; 6 inch pipe, 44 cents per foot; 7 inch pipe, 52 cents per foot; 8 inch pipe, 60 cents per foot.

It is scarcely necessary to advert to the *durability* of this pipe, as it is known to every reader that it was used in many countries centuries ago, where it is yet sound. I trust that in calling the attention of your readers to this pipe and the use I have made of it, with the success attending it, the lovers of pure water will give the matter due consideration; and where it is practicable, supply themselves with this indispensable article.

Respectfully yours, &c., Dwight Jarvis.

Massillon, Ohio, April 8th, 1851.

—*Ohio Cultivator.*

TO MAKE GOOD MORTAR.

Sour together a quantity of lime and clean sharp sand, for two or three weeks before being used; work this well and turn it aside, and as the proportion of lime to the sand will always depend on the quality of the former, all that is necessary, is to take care (in souring), if the lime is of a rich quality, to put one-third less lime into the heap than it is intended to be built with; and if the lime is of pure quality, say only one-fourth less. It may here be observed that in general, lime of the proper quality is best for cementing buildings. When the lime which has been previously soured, as before directed, is to be used in the building, or otherwise, it is to be again worked carefully over, and one-fourth of quick-lime added in proportions, taking care never to have more in preparation than can be used in a short time; and this quick-lime should be most completely beaten and incorporated with the soured lime, and it will be found to have the effect of causing the old lime to set and bind in the most complete manner. It will become perfectly solid without the least evaporation to occasion cracks, which can only ensue in consequence of evaporation; and this can only happen from the want of proper union between the two bodies. But by mixing and beating the quick-lime with the soured mortar, immediately before it is applied to use, the component parts are brought so near to each other, that it is impossible either crack or flaw can take place. In short, beating has the effect of closing the interstices of the sand, and a small quantity of lime paste is effectual in fitting and holding the grains together, so as to form a plastic mass, by uniting the grains of sand which otherwise would not fit each other. This system will apply to the lime mortar for all descriptions of work, whether for building, plastering in the inside or outside of houses, water cisterns, ground vaults, rough castings, &c.—*Scientific American.*

DRAINING AND IRRIGATING MACHINE.

This machine is very favorably noticed by the Charleston Courier, the editor of which says: In compliance with the invitation extended by Mr. Lebby, quite a number of visitors assembled yesterday, to witness this curious and successful application of machinery to a purpose in which our rice planters especially are deeply interested. It is adapted both to draining and irrigating lands, and when set in motion by a steam engine of five horse power, is capable of raising from five to six thousand gallons per minute, which might be greatly increased by additional motive power. It has been inspected by several experienced planters, and been pronounced to be a most valuable agricultural appendage, sufficiently simple to be worked by the negroes on plantations, and not liable to get out of repair. The credit of this clever adaptation of well known philosophical principles to the improvement of the culture of one of our great staples belongs to a young Charlestonian, who, to a natural genius for mechanism, adds the fruits of years of laborious study and practice, in his high and honorable vocation.—*Farmer and Mechanic.*

Ladies' Department.

BODILY EXERCISE IN EARLY LIFE.

To fetter the active motions of children, as soon as they have acquired the use of their limbs, is a barbarous opposition to nature; and to do so, under a pretence of improving their minds and manners, is an insult to common sense. It may, indeed, be the way to train up enervated puppets, or short-lived prodigies of learning; but never to form healthy, well-informed and accomplished men and women. Every feeling individual must behold, with much heart-felt concern, poor little puny creatures, of eight, ten or twelve years of age, exhibited by the silly parents as proficients in learning, or as distinguished for their proficiency in languages, elocution, music, drawing, or even some frivolous acquirement. The strength of the mind as well as of the body is exhausted, and the natural growth of both is checked by such untimely exertions. We are far from discouraging the early introduction of youth into the sweet and even moralizing society of the muses and the graces; but we would have them pay their court also to the goddess of health, and spend a considerable portion of their time, during the above period at least, in innocent and enlivening sports and gambols.—*Journal of Health.*

A HINT TO YOUNG LADIES.

An intelligent gentleman of fortune visited a country village in Maine, not very far from Bangor, and was hospitably entertained and lodged by a gentleman having three daughters—two of whom in rich dresses entertained the distinguished stranger in the parlor, while one kept herself in the kitchen, assisting her mother in preparing the food and setting the table for tea; and after the supper, in doing the work till it was fully completed; when she also joined her sisters in the parlor for the remainder of the evening. The next morning the same daughter was again early in the kitchen, while the

other two were in the parlor. The gentleman, like Franklin, possessed a discriminating mind—was a close observer of the habits of the young ladies—watched an opportunity and whispered something in the ear of the industrious one, and then left for a time, but revisited the same family, and in about one year the young lady of the kitchen was conveyed to Boston, the wife of the same gentleman visitor, where she now presides at an elegant mansion. The gentleman whose fortune she shares she won by a judicious deportment and well-directed industry. So much for an industrious young lady.

TO PRESERVE HAMS THROUGH SUMMER.

Make a number of common cotton bags a little larger than your hams; after the hams are well smoked, place them in the bags; then get the very best sweet made hay, cut it with a cutting-box or knife, with your hands press it well around the ham in the bags, tie your bags with good strings, put on a card of the year to show their age, and hang them up in your garret, or some dry place; and my word for it, you let them hang for five years, they will be better than on the day you put them up. I have kept them for seven years. This method costs but little, as the bag will last for years. The only loss is the hay, and that the cattle will eat, if given to them in the winter. The sweating of the hams will be taken up by the hay, and it will also impart a very fine flavor to the meat.—*Genesee Farmer.*

COLORING GREEN TEA.

Large portions of the tea imported under the name of *green*, are made so by throwing into the pans at the last heating of the leaves a mixture of finely powdered *indigo and gypsum*, in proportion of three of the former to four of the latter. For every 100 lbs. of green tea used the consumer will swallow from 8 to 12 oz. of the latter. But the same persons who will exclaim against the *celestials* for munching rats, cats, and bow-wows, will swallow indigo and gypsum, or what is much worse, prussic acid or verdigris, both deadly poisons, and which are furnished us outside barbarians, simply because our market demands it, as it did annattoed cheese a few years since.

Cookery.—Never buy potatoes that have been washed many days and exposed to the air. Never peel them before boiling, as a large portion of the substance is thus lost; but before boiling make an incision all round through the peel, and another cross ways; this allows the steam to escape and makes the potatoes mealy; if it is not done and the skin does not crack, they will be waxy.

To Remove Grease Spots from Furniture, Wood or Marble.—Make a paste with fuller's earth, soft-soap, and pearlash, and spread over the spot, and let it dry for twenty-four hours, and then wash off the paste.

Purple Dye.—Put on logwood chips in a copper kettle and let it boil about fifteen minutes.—Take it off and strain off the chips, and put in some alum while hot to set the color; when dissolved, put in your wool or cotton, and set it on the fire to boil a few minutes to take the dye.

NOTICES OF PUBLICATIONS.

Farmer's Guide to Scientific and Practical Agriculture, by Henry Stephens, assisted by J. P. Norton, Professor of Agriculture in Yale College, New Haven. Stephens is allowed to be the best writer in England on practical farming, and his work, from which this is a reprint, is the most approved standard. Prof. Norton's plain and familiar articles on scientific agriculture are well known throughout this country. His remarks are intended to adapt the work to American farming. The 17th and 18th numbers are just received; the former contains Prof. Norton's appendix on summer, which is very interesting. The last number contains 32 pages more than usual, 96 instead of 64, and the remaining five numbers will contain 96 pages each; a liberality not usually met with in publishers, as they too often fall short of their promises. We would recommend this as a very valuable and cheap work, embracing over 1600 pages, 200 more than was promised, at only $5. Published by Leonard Scott & Co., New York. Sold also by Redding & Co., State Street, Boston.

Report on the second annual exhibition of the New England Society for the Improvement of Domestic Poultry. Boston: H. L. Devereux & Co., printers. This is a very neat pamphlet, embellished with fine engravings of fowls and scenery. It contains the names of exhibitors, and the fowls shown by them, with remarks on several varieties of fowls, a list of officers and members of the association, &c. &c.

☞ The New England Farmer is published *every other* Saturday by John Raynolds and Joel Nourse, at Quincy Hall, South Market Street, Boston.

Terms, $1,00 per annum in advance.

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